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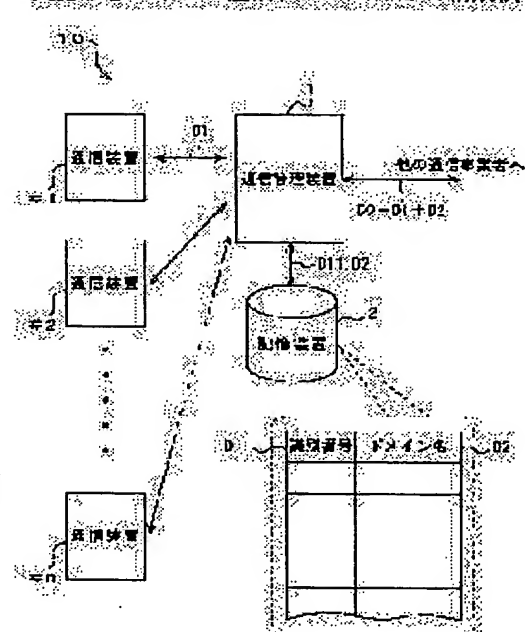
## (54) COMMUNICATION SYSTEM, COMMUNICATION DEVICE, AND COMMUNICATION METHOD

(57)Abstract:

PROBLEM TO BE SOLVED: To improve operability for input of a mail address at the time of transmission of electronic mail information.

SOLUTION: A system which communicates electronic mail information on the basis of a mail address D0 having a telephone number D1 of the destination and a domain name D2 of a communication enterpriser is provided with communication devices #i which inputs the telephone number D1 including an enterpriser number D11 and communicate electronic mail information on the basis of the mail address D0, a storage device 2 where a reference table of correspondence between the enterpriser number D11 and the domain name D2 of the communication enterpriser is stored, and a communication management device 1 which takes the enterpriser number D11 received from communication devices #i as the address to read out the domain name D2 of the communication enterpriser from the storage device 2, and this communication management device 1 synthesizes the telephone number D1 of the destination received from the communication device #i and the domain name D2 read out from the storage device 2 to construct the mail address D0.

実施形態としての通信システム10の構成例



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**CLAIMS**


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**[Claim(s)]**

**[Claim 1]** While inputting the telephone number information which is the system which communicates electronic mail information based on the mail address which has a phase hand's telephone number information, and a communication link entrepreneur's domain name information, and includes said communication link entrepreneur's identification number information Two or more communication devices which communicate electronic mail information based on a mail address, The storage which memorized the reference table which matched said communication link entrepreneur's identification number information, and the domain name information of the communication link entrepreneur concerned, It has communication management equipment managed so that identification number information of the communication link entrepreneur who received from said communication device may be made into the address and the domain name information of the communication link entrepreneur concerned may be read from said storage. Said communication management equipment is communication system characterized by compounding the telephone number information received from said communication device, and the domain name information read from said storage, and building a mail address.

**[Claim 2]** Communication system according to claim 1 characterized by carrying out renewal of automatic of a communication link entrepreneur's domain name information which formed storage for said every communication link entrepreneur, and was memorized by said storage at any time.

**[Claim 3]** Communication system according to claim 1 characterized by transmitting electronic mail information to said communication device by which said communication management equipment of the communication link entrepreneur concerned was connected to other communication link entrepreneurs' communication management equipment through the communication network, and the line connection was carried out with said communication management equipment.

**[Claim 4]** Communication system according to claim 1 characterized by having the storage which memorized the reference table which matched said communication link entrepreneur's identification number information, and conditions-of-a-country news and the domain name information of the communication link entrepreneur concerned.

**[Claim 5]** It is equipment which communicates electronic mail information based on the mail address which has a phase hand's telephone number information, and a communication link entrepreneur's domain name information. The input means operated in order to input telephone number information including said communication link entrepreneur's identification number information, The storage which memorized the reference table which matched said communication link entrepreneur's identification number information, and the domain name information of the communication link entrepreneur concerned, It has the control unit which makes the address a communication link entrepreneur's identification number information that it was inputted by said input means, and reads the domain name information of the communication link entrepreneur concerned from said storage. Said control unit The communication device characterized by compounding the telephone number information inputted by said input means, and the domain name information read from said storage, and building a mail address.

**[Claim 6]** The communication device according to claim 5 characterized by having the rewriting mode which carries out renewal of automatic of a communication link entrepreneur's domain name information memorized by said storage.

**[Claim 7]** Said rewriting mode is a communication device according to claim 6 characterized by being made as [ update / said domain name information / it is started by said communication link entrepreneur and / at any

time ].

[Claim 8] It is the approach of communicating electronic mail information based on the mail address which has telephone number information and a communication link entrepreneur's domain name information. When creating the reference table which matched said communication link entrepreneur's identification number information, and the domain name information of the communication link entrepreneur concerned beforehand and transmitting said electronic mail information Input telephone number information including said communication link entrepreneur's identification number information, make into the address said communication link entrepreneur's identification number information that it was inputted, and the domain name information of the communication link entrepreneur concerned is read from said reference table. Then, the correspondence procedure characterized by compounding said telephone number information inputted previously and the domain name information read from said reference table, and building a mail address.

[Claim 9] The correspondence procedure according to claim 8 characterized by updating said reference table according to modification of said communication link entrepreneur's domain name information.

[Claim 10] The correspondence procedure according to claim 8 characterized by creating the reference table which matched said communication link entrepreneur's identification number information, and conditions-of-a-country news and the domain name information of the communication link entrepreneur concerned.

[Translation done.]

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## DETAILED DESCRIPTION

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### [Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention is applied to the electronic mail communication system using a portable telephone, a personal computer, etc., and relates to suitable communication system, a communication device, and a correspondence procedure.

[0002] In detail, it has the control unit which makes the address a communication link entrepreneur's identification number information, and reads the domain name information of the communication link entrepreneur concerned from storage when transmitting electronic mail information to the other party, the telephone number information inputted by the user and the domain name information read from storage are compounded, automatic construction of the mail address is carried out, and it enables it to improve the input operability of a mail address compared with the conventional method.

[0003]

[Description of the Prior Art] The case where the electronic mail (E-mail) communication service which makes the content of a letter which is dealt with by mail the content of electronic intelligence, and is transmitted to the other party is used in recent years has increased. In this kind of service system, it is used so that an electronic mail may be transmitted and received by portable telephones, and between a portable telephone and personal computers (henceforth a personal computer) and personal computers.

[0004] When transmitting an electronic mail to the other party with this service system, it is made as [ input / into communication link processors, such as a portable telephone and a personal computer, / the content of e-mail information, and a mail address ]. The mail address consists of a phase hand's telephone number, "@" notation @, and a communication link entrepreneur's domain name. A domain name means the letter-symbol information for identifying a communication link entrepreneur here. A communication link entrepreneur is made as [ transmit / based on a mail address / to the other party's portable telephone, a personal computer, etc. / electronic mail information ].

[0005]

[Problem(s) to be Solved by the Invention] By the way, according to the electronic mail communication link service system of the conventional method, there are the following problems.

[0006] \*\* a user's portable telephone to the other party's portable telephone, or a user's portable telephone to the other party's personal computer — moreover, when transmitting an electronic mail to the other party's personal computer etc. from a user's personal computer, a user has to input the other party's telephone number and has to input a Roman alphabet, a notation, etc. also about the domain name below "@" notation @ after that.

[0007] What incidentally used the compaction telephone function about the mail address is indicated by JP,2000-148363,A. In case a user registers with the memory in a portable telephone about the mail address which consists of a phase hand's telephone number, "@" notation @, and a communication link entrepreneur's domain name according to this function, the abbreviated number and the mail address are made to correspond. When transmitting electronic mail information, the abbreviated number was made into the address and the mail address is read.

[0008] Therefore, although a mail address can be read from next time with an abbreviated number, the first time all surely needs to input the mail address which consists of a communication link entrepreneur's domain names as a phase hand's telephone number, and "@" notation @. The input of the domain name below "@" notation @ takes time and effort.

[0009] \*\* When a communication link entrepreneur's domain name changes, a user needs to update a mail address by himself again. Incidentally, if a transmission place is the same communication link entrepreneur, electronic mail information can be transmitted only with the telephone number. However, when a communication link entrepreneur's domain name is changed, the user itself has to update the memory content in a portable telephone in an above-mentioned example. When a communication link entrepreneur's domain name changes, you cannot transmit an electronic mail without renewal of a domain name any longer only with the telephone number.

[0010] Then, this invention solves such a conventional technical problem, and it aims at offering the communication system, communication device, and correspondence procedure which enabled it to improve the input operability of the mail address at the time of transmitting electronic mail information.

[0011]

[Means for Solving the Problem] While inputting the telephone number information which the technical problem mentioned above is a system which communicates electronic mail information based on the mail address which has a phase hand's telephone number information, and a communication link entrepreneur's domain name information, and includes a communication link entrepreneur's identification number information The storage which memorized the reference table which matched the communication device which communicates electronic mail information based on a mail address, and a communication link entrepreneur's identification number information and the domain name information of the communication link entrepreneur concerned, It has communication management equipment managed so that identification number information of the communication link entrepreneur who received from the communication device may be made into the address and the domain name information of the communication link entrepreneur concerned may be read from storage. This communication management equipment is solved by the communication system characterized by compounding the telephone number information received from the communication device, and the domain name information read from storage, and building a mail address.

[0012] When communicating electronic mail information based on the mail address which has a phase hand's telephone number information, and a communication link entrepreneur's domain name information according to the communication device concerning this invention, the storage which memorized the reference table which matched a communication link entrepreneur's identification number information and the domain name information of the communication link entrepreneur concerned beforehand is prepared for a communication link entrepreneur side. And if telephone number information including a communication link entrepreneur's identification number information is inputted into a communication device by the user, with communication management equipment, a communication link entrepreneur's identification number information will be made into the address, and reading appearance of the domain name information of the communication link entrepreneur concerned will be done to it by him from storage. Then, with communication management equipment, it is made as [ build / compound the telephone number information received from the communication device, and the domain name information read from storage, and / a mail address ].

[0013] Therefore, even if a user does not input a communication link entrepreneur's domain name other than telephone number information into a communication device one by one like the conventional method, automatic construction of the mail address which consists of a telephone number + domain name can be carried out by the communication link entrepreneur side. Thereby, a user only inputs telephone number information including a communication link entrepreneur's identification number information into a communication device, and can transmit electronic mail information to the other party. The input operability of a mail address is improvable. Improvement in the interface function at the time of e-mail transmission can be aimed at.

[0014] The communication device concerning this invention is equipment which communicates electronic mail information based on the mail address which has a phase hand's telephone number information, and a communication link entrepreneur's domain name information. The input means operated in order to input telephone number information including a communication link entrepreneur's identification number information, The storage which memorized the reference table which matched a communication link entrepreneur's identification number information, and the domain name information of the communication link entrepreneur concerned, It has the control unit which makes the address a communication link entrepreneur's identification number information that it was inputted by this input means, and reads the domain name information of the communication link entrepreneur concerned from storage. This control unit is characterized by compounding the telephone number information of the phase hand inputted by the input means, and the domain name information read from storage, and building a mail address.

[0015] When communicating electronic mail information based on the mail address which has a phase hand's telephone number information, and a communication link entrepreneur's domain name information according to the communication device concerning this invention, the storage which memorized the reference table which matched a communication link entrepreneur's identification number information and the domain name information of the communication link entrepreneur concerned beforehand is prepared. And an input means is operated by the user and it is made as [ input / into a control unit / telephone number information including a communication link entrepreneur's identification number information ]. In a control unit, a communication link entrepreneur's identification number information is made into the address, and reading appearance of the domain name information of the communication link entrepreneur concerned is carried out from storage. Then, in a control unit, it is made as [ build / compound the telephone number information of the phase hand inputted by the user, and the domain name information read from storage and / a mail address ].

[0016] Therefore, even if a user does not input a communication link entrepreneur's domain name other than a phase hand's telephone number information one by one like the conventional method, automatic construction of the mail address which consists of a telephone number + domain name can be carried out. Thereby, a user only inputs telephone number information including a communication link entrepreneur's identification number information, and can transmit electronic mail information to the other party. The input operability of a mail address is improvable.

[0017] The correspondence procedure concerning this invention is the approach of communicating electronic mail information based on the mail address which has a phase hand's telephone number information, and a communication link entrepreneur's domain name information. When creating the reference table which matched a communication link entrepreneur's identification number information, and the domain name information of the communication link entrepreneur concerned beforehand and transmitting electronic mail information Make into the address a communication link entrepreneur's identification number information that inputted telephone number information including a communication link entrepreneur's identification number information, and it was inputted here, and the domain name information of the communication link entrepreneur concerned is read from a reference table. It is characterized by compounding the telephone number information of the phase hand inputted previously, and the domain name information read from the reference table, and building a mail address.

[0018] According to the correspondence procedure concerning this invention, in case electronic mail information is transmitted, even if a user does not input a communication link entrepreneur's domain name other than a phase hand's telephone number one by one like the conventional method, automatic construction of the mail address which consists of a telephone number + domain name can be carried out. Thereby, a user only inputs telephone number information including a communication link entrepreneur's identification number information, and can transmit electronic mail information to the other party. The input operability of a mail address is improvable.

[0019]

[Embodiment of the Invention] Then, the gestalt of 1 operation of the communication system concerning this invention, a communication device, and a correspondence procedure is explained, referring to a drawing.

[0020] (1) Operation gestalt drawing 1 is the block diagram showing the example of a configuration of the communication system 10 as an operation gestalt concerning this invention. With this operation gestalt, when communicating electronic mail information based on a mail address It has communication management equipment managed so that a communication link entrepreneur's identification number information may be made into the address and the domain name information of the communication link entrepreneur concerned may be read. This communication management equipment compounds the telephone number information received from the communication device, and the domain name information read from storage, and a mail address is built. Even if a user does not input a communication link entrepreneur's domain name other than a phase hand's telephone number information into a communication device one by one like the conventional method, while being able to be made to carry out in a communication link entrepreneur side automatic construction of the mail address which consists of a telephone number + domain name Only by inputting telephone number information including a communication link entrepreneur's identification number information, it enables it to transmit electronic mail information to the other party.

[0021] The communication system 10 shown in drawing 1 is a system which communicates electronic mail information based on the mail address D0 which has a phase hand's telephone number information D1, and a communication link entrepreneur's domain name information D2. In this system 10, communication management equipment 1 is formed in a communication link entrepreneur side, and it is made as [ manage / the mail address

D0 of the transmission place of electronic mail information ]. Internet Gateway server equipment etc. is used for this communication management equipment 1.

[0022] In this system 10, the communication management equipment 1 of the communication link entrepreneur concerned is connected to other communication link entrepreneurs' communication management equipment 1 through communication networks, such as the Internet, and it is made as [ transmit / to a phase hand's communication device by which the line connection was carried out with this communication management equipment 1 / electronic mail information ].

[0023] Storage 2 is connected to communication management equipment 1, and it is made as [ memorize / the reference table which matched a communication link entrepreneur's identification number information, and the domain name information D2 of the communication link entrepreneur concerned ]. Whenever this reference table changes the domain name information D2, it is updated by the communication link entrepreneur. It is for not applying the burden concerning an update process of the domain name information D2 to a user.

[0024] Two or more communication device #i ( $i=1-n$ ) is prepared for a user side by this system 10, and while inputting the telephone number information D1 including a communication link entrepreneur's identification number information D11, it is made as [ transmit / based on the mail address D0 of the normal built by the communication link entrepreneur / to a phase hand / electronic mail information ]. A portable telephone, a walkie-talkie terminal unit, a personal computer, etc. are used for communication device #i.

[0025] With communication management equipment 1, it is managed so that identification number information D11 of the communication link entrepreneur who received from a user's communication device #i may be made into the address and the domain name information D2 of the communication link entrepreneur concerned may be read from storage 2. This communication management equipment 1 is made as [ carry out / compound the telephone number information D1 received from communication device #i, and the domain name information D2 read from storage 2, and / automatic construction of the mail address D0 ].

[0026] Then, the correspondence procedure concerning this operation gestalt is explained. Drawing 2 is a flow chart which shows the example of processing in communication system 10. It is premised on the case where electronic mail information is communicated based on the mail address D0 which has a phase hand's telephone number information D1, and a communication link entrepreneur's domain name information D2, in this system 10. Moreover, the case where a communication link entrepreneur performs e-mail communication service in which a mail address D0 carries out automatic construction based on a phase hand's telephone number information D1 is assumed.

[0027] In a communication link entrepreneur side, the reference table which matched the identification number information D11 of the communication link entrepreneur concerned and the domain name information D2 of the entrepreneur concerned beforehand at step A1 of the flow chart of drawing 2 is created on the assumption that this. The reference table created here is stored in the storage 2 connected to communication management equipment 1.

[0028] Then, establishment of the e-mail communication service concerned decides whether to transmit electronic mail information freely in a user side. In a communication link entrepreneur side, it waits to receive the telephone number information D1 from a user at step A2. When a user transmits electronic mail information, the electronic mail information for transmitting to a phase hand and the telephone number information D1 including a communication link entrepreneur's identification number information D11 are inputted into communication device #i which a user possesses.

[0029] If step A3, in response, receives the content of e-mail information, and the telephone number information D1 from a user's communication device #i by the communication link entrepreneur side, identification number information D11 of the communication link entrepreneur concerned will be made into the address with communication management equipment 1 by step A4, and reading appearance of the domain name information D2 of the communication link entrepreneur concerned will be carried out from the reference table of a store 2. Then, the telephone number information D1 of the phase hand who shifted to step A5 and was previously inputted with communication management equipment 1, and the domain name information D2 read from the reference table are compounded, and a transmitting phase hand's mail address D0 is built.

[0030] And in communication management equipment 1, electronic mail information is transmitted to a phase hand based on a mail address D0 at step A6. Then, with the communication system 10 concerned, it is judged at step A7 whether e-mail communication service is ended. The decision in this case is a communication link entrepreneur. When continuing e-mail communication service, it is confirmed whether shifted to step A8 and modification was shown in the reference table. When there is no modification in this reference table, it returns to



step A2. When modification is shown in this reference table, it returns to step A1, and a reference table is updated, such as rewriting the domain name information D2 of a communication link entrepreneur with modification. Then, it waits to shift to step A2 and to receive the telephone number information D1 from a user. [0031] Thus, when communicating electronic mail information based on the mail address D0 which has a phase hand's telephone number information D1, and a communication link entrepreneur's domain name information D2 according to the communication system 10 concerning this invention, even if a user does not input a communication link entrepreneur's domain name other than a phase hand's telephone number information D1 into communication device #i one by one like the conventional method, automatic construction of the mail address D0 which consists of a telephone number + domain name can be carried out by the communication link entrepreneur side.

[0032] Therefore, a user only inputs the telephone number information D1 including a communication link entrepreneur's identification number information D11 into communication device #i, and can transmit electronic mail information to the other party. The input operability of a mail address D0 is improvable. The interface function of communication device #i in the user at the time of e-mail transmission can be raised.

[0033] (2) The 1st example drawing 3 is the block diagram showing the example of a configuration of the electronic mail communication link service system 100 as the 1st example concerning this invention. In this example, when transmitting an electronic mail to the other party's portable telephone 101 from the portable telephone 101 used as an example of a communication device, the system which changes to a mail address D0 like the conventional method, and transmits electronic mail information only for a phase hand's telephone number information (only henceforth the telephone number) D1 is built.

[0034] It is an example of communication system 10, the portable telephone 101 used as an example of communication device #i is prepared for a user side, and the electronic mail communication link service system 100 shown in drawing 3 is made as [ transmit / based on the mail address D0 of the normal built by the communication link entrepreneur / to a phase hand / electronic mail information ] while it inputs the telephone number D1 including a communication link entrepreneur's identification number information (only henceforth an entrepreneur number) D11. A walkie-talkie terminal unit, a personal computer, etc. may be used for communication device #i other than a portable telephone 101. Please refer to the 2nd example about the example of an internal configuration of a portable telephone 101.

[0035] At this example, it is portable telephone #1 of a user and #2 in the communication link entrepreneur A... A contract of #n is made and the mobile communication network according to individual is built. other communication link entrepreneurs B — portable telephone #n+1 — a contract of ... etc. is made and the mobile communication network according to individual is built. The communication link entrepreneurs' A and B each is equipped with a base transceiver station 11, communication management equipment 1, and a database 12. In a base transceiver station 11, it is made as [ receive / a wireless electric wave / in a user's portable telephone #i etc. and the frequency band given beforehand / transmit and ].

[0036] Communication management equipment 1 is connected to the base transceiver stations 11, such as each communication link entrepreneurs A and B, and it is made as [ manage / the mail address D0 of the transmission place of electronic mail information ]. Communication management equipment 1 has the exchange 13 and Gateway (henceforth GW) server equipment 14.

[0037] The Internet 15 used as an example of a communication network is accessed, and the communication link entrepreneur's A GW server equipment 14 is connected to other communication link entrepreneurs' B GW server equipment 14. The exchange 13 is connected to each base transceiver station 11, a communication line is connected based on the telephone number D1 of a phase hand's communication device #i, and it is made as [ transmit / to the phase hand's communication device #i / electronic mail information ].

[0038] The database 12 used as an example of a store is connected to the exchange 13, and it is made as [ memorize / the reference table which matched the entrepreneur number D11 and the domain name information (only henceforth a domain name) D2 of the communication link entrepreneur concerned ]. Whenever this reference table changes a domain name D2, it is updated by the communication link entrepreneur. It is for not applying the burden concerning an update process of a domain name D2 to portable telephone 101 user.

[0039] At the exchange 13, for example, it received from portable telephone #1 of a user, it is managed so that the communication link entrepreneur's B entrepreneur number D11 may be made into the address and the domain name D2 of the communication link entrepreneur B concerned may be read from a database 12. This exchange 13 is made as [ carry out / compound the telephone number D1 received from portable telephone #1, and the domain name D2 read from the database 12, and / automatic construction of the mail address D0 ].

[0040] Moreover, while GW server equipment 14 is connected to the exchange 13, the Internet 15 is connected to this GW server equipment 14, and it is made as [ communicate / electronic mail information / based on the mail address D0 which consists of a phase hand's telephone number D1 and a communication link entrepreneur's domain name D2 / through the Internet 15 ]. The node of each GW server equipment 14 and Internet 15 changes with communication link entrepreneurs A and B etc. It is because it has the mobile communication network according to individual for every communication link entrepreneur.

[0041] Drawing 4 A and B is drawings showing the example of a configuration of the telephone number system and mail address D0 which are applied with the electronic mail communication link service system 100 concerned. In drawing 4 A, the triple figures of the beginning are the service number "000" which identifies a cellular phone and communication service, such as PHS, for the telephone number system applied with the electronic mail communication link service system 100. The following triple figure is the entrepreneur number "\*\*\*\*\*" which identifies the communication link entrepreneur (henceforth a cellular phone business operator) who becomes an example of the entrepreneur number D11. It is a subscriber's number "xxxxx" for the last 5 figures to identify a cellular-phone subscriber. These are named generically, it is called the telephone number D1, and any number is inputted in an arabic numeral in a user's portable telephone #i.

[0042] Although the user was performing the Roman alphabet input etc. also about the domain name D2 below "@" notation @ by the conventional method, it enables it to exclude all the inputs of the domain name D2 below "@" notation @ in this example, although a mail address D0 consists of the above-mentioned telephone number D1, "@" notation @, and a domain name as shown in drawing 4 B.

[0043] Drawing 5 is image drawing showing the example of a content of the domain name reference table for in and outside the country. In this example, the domain name reference table which matched a cellular phone business operator's entrepreneur number D11, and conditions-of-a-country news and the domain name D2 of the cellular phone business operator concerned is prepared beforehand. For example, it connects with the exchange 13 which explained by drawing 3, and the domain name reference table which applied the country code is stored in a database 12.

[0044] A country code is used when transmitting electronic mail information to overseas only with the telephone number D1. It is because a cellular phone business operator cannot be specified only by the entrepreneur number D11 about e-mail transmission abroad. Two, a country code and the entrepreneur number D11, are made to correspond, and he specifies a cellular phone business operator and is trying to make a domain name correspond in this example. The mail address D0 in this case has a system of a country code + telephone number +@ domain name.

[0045] Therefore, the service number of the single figure of a phase hand's telephone number D1 shown in drawing 4 A is deleted, and a country code is described here. When transmitting an electronic mail to overseas from portable telephone #1, it is a cellular phone business operator's exchange 13, and it is made as [ form / a mail address D0 ] by combining the domain name of a phase hand's country code, the telephone number D1, and an entrepreneur proper. About the electronic mail to our country from overseas, it becomes possible by specifying the cellular phone business operator of our country from a phase hand's country code and the telephone number D1 to find out the domain name of the cellular phone business operator proper.

[0046] This domain name reference TEBU is summarized to a tabular format, the country code "81" which shows Japan as opposed to entrepreneur number D11= "345" according to that example of a content is described, and @aaa.bbbb.ne.jp is described as a response domain name D2. The country code "1" which shows other countries is described to entrepreneur number D11= "798", and @xxx.aaaa.ne.jp is described as a response domain name D2.

[0047] Similarly, to entrepreneur number D11= "123", a country code "81" is described and @yyy.zzzz.ne.jp is described as a response domain name D2. Thereby, even if it is e-mail transmission abroad in using a country code, electronic mail information can be transmitted only with a phase hand's telephone number D1. In addition, a country code may be omitted when transmitting and receiving an electronic mail at home.

[0048] Then, the example of processing in GW server equipment 14 in the electronic mail communication link service system 100 concerned is explained. Drawing 6 is a flow chart which shows the example of processing in a cellular phone business operator's GW server equipment 14.

[0049] It is premised on the case where a mail address D0 is created by the cellular phone business operator side, in this example. The case where the newest thing is prepared about the domain name reference table, and there is surely a response domain name D2 is assumed. In a domain name reference table, when there is no response domain name D2, it shall be the case of an input mistake of a portable telephone user, and in such an

input mistake, a retransmission-of-message demand shall be given from a cellular phone business operator to portable telephone #i.

[0050] A phase hand's telephone number D1 and the content of electronic mail information are transmitted to a base transceiver station 11 from portable telephone #i on the assumption that this. In response at step B1 of the flow chart shown in drawing 6, GW server equipment 14 receives electronic mail information and the telephone number D1 through the exchange 13. Then, the domain name D2 in the database 12 connected to the exchange 13 based on the entrepreneur number D11 contained in the telephone number D1 with GW server equipment 14 by step B-2 is referred to. And if there is a domain name D2 of the entrepreneur number D11 of the phase hand who corresponds by the reference result at step B3, it will shift to step B5.

[0051] Since the input mistake \*\*\*\* probability by the side of a portable telephone user is high when there is no domain name D2 of the entrepreneur number D11 of the phase hand who corresponds by the reference result at the above-mentioned step B3, it shifts to step B4 and the retransmission-of-message demand of the telephone number D1 is made with GW server equipment 14 at a transmitting agency. In response by a user's portable telephone #i, it is made as [ input / the telephone number D1 except the content of electronic mail information / again ].

[0052] And in GW server equipment 14, the entrepreneur number D11 is made into the address through the exchange 13 in step B5, and reading appearance of phase hand's cellular phone business operator's domain name D2 is carried out from a domain name reference table. Then, the telephone number D1 of the phase hand who shifted to step B6 and was previously inputted with GW server equipment 14, and the domain name D2 read from the reference table are compounded, and a transmitting phase hand's mail address D0 is built. Then, in GW server equipment 14, electronic mail information is transmitted to a phase hand through the Internet 15 based on a mail address D0 at step B7.

[0053] Within phase hand's cellular phone business operator's GW server equipment 14, based on a mail address D0, the subscriber's number of a phase hand user's portable telephone #i is found out, and an electronic mail is transmitted to a phase hand's portable telephone #i through the exchange 13 and a base transceiver station 11. Then, with the electronic mail communication link service system 100 concerned, it is judged at step B8 whether e-mail communication service is ended. The decision in this case is a cellular phone business operator. When continuing e-mail communication service, it waits to return to step B1 and to receive the telephone number D1 of the electronic mail information from a user, and its phase hand.

[0054] Thus, according to the electronic mail communication link service system 100 as the 1st example concerning this invention When communicating electronic mail information based on the mail address D0 which has a phase hand's telephone number D1, and a cellular phone business operator's domain name D2 Even if a user does not input a cellular phone business operator's domain name D2 other than a phase hand's telephone number D1 into portable telephone #i one by one like the conventional method Automatic construction of the mail address D0 which consists of the telephone number D1+ domain name D2 can be carried out with a cellular phone business operator's GW server equipment 14.

[0055] Therefore, a user only inputs the telephone number D1 containing the entrepreneur number D11 into portable telephone #i, and can transmit electronic mail information to the other party. The input operability of the mail address D0 in the electronic mail communication link service system 100 is improvable. Improvement in the interface function of portable telephone #i in the user at the time of e-mail transmission can be aimed at.

[0056] Moreover, an electronic mail can be sent only with a phase hand's telephone number D1 even from overseas by using a country code. Moreover, \*\* has some which can specify a domain name D2 in a phase hand's telephone number D1 irrespective of the entrepreneur number D11, and it is possible to use it.

[0057] (3) The 2nd example drawing 7 is the block diagram showing the example of an internal configuration of a portable telephone 101 as the 2nd example. Portable telephone #i is equipped with the domain reference table function in which it explained in the 1st example, in the 2nd example.

[0058] That is, when transmitting electronic mail information based on a mail address D0 in the portable telephone 101 shown in drawing 7 It has the control unit which makes the address a cellular phone business operator's entrepreneur number D11, and reads a cellular phone business operator's domain name D2 from the storage of a non-volatile with a built-in portable telephone. By compounding the telephone number D1 of the phase hand inputted by the user, and the domain name D2 read from storage, and building a mail address D0, this control unit Even if a user does not input a cellular phone business operator's domain name D2 other than a phase hand's telephone number D1 one by one like the conventional method, while being able to be made to carry out automatic construction of the mail address D0 which consists of the telephone number D1+ domain

name D2 Only by inputting the telephone number D1 containing the entrepreneur number D11, it enables it to transmit electronic mail information to the other party.

[0059] The portable telephone 101 shown in drawing 7 communicates electronic mail information based on the mail address D0 which has a phase hand's telephone number D1, and a cellular phone business operator's domain name D2. This portable telephone 101 is equipped with CPU33 used as an example of a control device, and it is made as [ perform / mail address automatic construction mode and table automatic rewriting mode ].

[0060] Mail address automatic construction mode means the actuation which compounds the telephone number D1 of the phase hand inputted by the user, and the domain name D2 read from storage, and carries out automatic construction of the mail address D0 here. Moreover, table automatic rewriting mode means the actuation which carries out renewal of automatic of a cellular phone business operator's domain name D2 memorized by this kind of memory. This table rewriting mode is started by the cellular phone business operator, and while a user does not mean, it is made as [ update / a domain name D2 / at any time ]. A user changes the portable telephone 101 concerned into a standby condition, and should just place it.

[0061] The internal bus 38 is connected to this CPU33. The wireless receive section 41 which constitutes a radiotelephony function, the receiving signal-processing section 42, the sending-signal processing section 43, the wireless transmitting section 44, etc. are connected to this internal bus 38. The antenna common machine 45 is connected to the wireless receive section 41 and the wireless transmitting section 44, and it connects with the antenna 26.

[0062] In the wireless receive section 41, the wireless electric wave received with the antenna 26 is separated by the antenna common machine 45 with a sending signal, and only the input signal of a predetermined carrier frequency is chosen. RF magnification of the input signal is carried out with low noise amplifier etc. The input signal after magnification is mixed with the signal of a local dispatch frequency, and the input signal of an intermediate frequency is separated from this mixed signal. After an input signal is amplified with medium amplifier, rectangular recovery processing is performed. Analog-to-digital conversion of the input signal after the rectangular recovery is carried out, and it serves as digital receipt information.

[0063] An error correction is carried out after a control message and speech compression information recover from this receipt information. A control message is outputted to CPU33. This speech compression information is outputted to the receiving signal-processing section 42 from the wireless receive section 41. Speech compression information is decrypted and elongated in the receiving signal-processing section 42. After digital to analog of the speech information after expanding is carried out, it is amplified, and it is outputted from the loudspeaker 24 for earphones. The loudspeaker 32 for tooth backs is connected to this receiving signal-processing section 42, and you may make it tell a call in by the pseudo-vocal sound "PITSU, PITSU, and PITSU ..." at the time of arrival of the mail.

[0064] Moreover, the sending-signal processing section 43 is connected to a microphone 28, and after a self sound signal is amplified, analog-to-digital conversion is carried out. The speech information after conversion is encoded and compressed. The speech compression information after coding is outputted to the wireless transmitting section 44 from the sending-signal processing section 43. In the wireless transmitting section 44, the control message and speech compression information from CPU33 are compounded, and an error correcting code is added further. The transmit information after sign addition is modulated. Digital to analog of the transmit information after a modulation is carried out. The sending signal after conversion is amplified after being changed into the sending signal of an intermediate frequency. The sending signal after magnification becomes irregular, and power amplification of the signal of a carrier frequency is carried out, and it is radiated towards a base transceiver station 11 from an antenna 26.

[0065] Moreover, the I/O-interface section 39 is connected to CPU33, and the manual operation button 25 used as an example of an input means and the key array 27 are further connected to the I/O-interface section 39. A manual operation button 25 is operated when transmitting for example, electronic mail information. in case the key array 27 inputs the telephone number D1 (this invention method — a phase hand's telephone number), title, and text containing the entrepreneur number D11 into CPU33 at the time of an e-mail communication link, it is operated.

[0066] Furthermore, EEPROM (it is the read-only memory in which informational writing and informational elimination are possible electrically)36 used as an example of storage is connected to an internal bus 38, and the domain name reference table which matched the entrepreneur number D11 and the domain name D2 of the cellular phone business operator concerned is memorized. Portable telephone 101 body is equipped with a domain name reference table, and it is sold.

[0067] Therefore, when a user does electronic mail transmission, it is not necessary to input the domain name D2 below "@" notation @ one by one like the conventional method. Although a phase hand's telephone number D1 and electronic mail subscriber information, such as abbreviated dialing, are recorded on EEPROM36, also when using the compaction add function of the well-known telephone number D1, the time and effort which registers the domain name D2 below "@" notation @ can be saved. In addition, you may make it memorize the control program for performing mail address D0 automatic construction mode and table automatic rewriting mode to EEPROM36.

[0068] In above-mentioned CPU33, it is made as [ read / make into the address a cellular phone business operator's identification number D11 inputted by the manual operation button 25, the key array 27, etc., and / from EEPROM36 / the domain name D2 of the cellular phone business operator concerned ]. CPU33 is made as [ build / compound the domain name D2 read from the telephone numbers D1 and EEPROM36 of the phase hand inputted by the key array 27, and / a mail address D0 ].

[0069] Furthermore, ROM34 is connected to an internal bus 38, and each control program CP for controlling the whole portable telephone 101 is memorized. The control procedure of the reception which used communication link modems, such as a control procedure of the transmitting processing which used communication link modems, such as a display control of a liquid crystal display 23, and the sending-signal processing 43, the wireless transmitting section 44, about control program CP, the wireless receive section 41, and the receiving signal processing 42, is described. EEPROM36 other than ROM34 may be used for storing of control program CP. It is because it becomes rewritable [ control program CP ] at the time of version up.

[0070] While it will be started if mail address automatic construction mode has a manual operation button 25 pushed by CPU33 at the time of electronic mail transmission, and reading control program CP from ROM34, it is made as [ carry out / according to the control program CP / mail address automatic construction processing ]. Table automatic rewriting mode is started by the cellular phone business operator. After being called by the base transceiver station 11 about table automatic rewriting mode, it is made as [ start / the portable telephone of a standby condition itself ]. The communications control which used communication link modems, such as the sending-signal processing 43 and the wireless transmitting section 44, is made. A standby condition means the condition of power-source reduction of labor, if system LSIs of a portable telephone 101, such as CPU33 and LCD23, remove a clock function.

[0071] Furthermore, a liquid crystal display 23, RAM35, and the external I/O interface 37 are connected to the internal bus 38. In a liquid crystal display 23, it is made as [ display / on a screen / the other party or the telephone number D1 of a local station which are performed based on control program CP, the content of the text concerning the electronic mail whose other party received a message, and the electronic mail transmitted to the other party, etc. ].

[0072] RAM35 is used as a working memory and text, such as a control message by the wireless receive section 41 and electronic mail information at the time of an absence, is recorded temporarily. A domain name reference table may be recorded on RAM35 instead of EEPROM36. In that case, RAM with a backup power supply is used.

[0073] In addition, the external I/O interface 37 is connected to the internal bus 38, and it results in the USB terminal for external devices which is not illustrated, and is made as [ extend / the information processing which used the external personal computer, the external IC card, and the communication link modem ]. It is convenient when rewriting the control program in mail address automatic construction mode and table automatic rewriting mode. Of course, the power supply section 93 is connected to these functional processing circuits, and when performing table automatic rewriting mode, the electric power switch SW must be turned on. The portable telephone 101 concerned will be in a standby condition by power-source ON.

[0074] Then, the example of processing at the time of the electronic mail transmission in a portable telephone 101 is explained. Drawing 8 is a flow chart which shows the example of processing at the time of the electronic mail transmission in a portable telephone 101.

[0075] It is premised on the case where a mail address D0 is created by the portable telephone side, in this example. The case where it is updated by the cellular phone business operator about the domain name reference table at the newest thing, and the response domain name D2 is surely shown in the domain name reference table concerned is assumed. In a domain name reference table, when there is no response domain name D2, it shall be the case of an input mistake of a portable telephone user, and in such an input mistake, in the portable telephone 101 concerned, a reinput demand shall be displayed on the liquid crystal display monitor 23.

[0076] A user inputs a phase hand's telephone number D1, and the content of electronic mail information into the portable telephone 101 concerned at step C1 of the flow chart shown in drawing 6 using the key array 27 on



the assumption that this. After these information inputs are completed, in order that a user may opt for electronic mail transmission, the depression of the manual operation button 25 is carried out. Then, the domain name D2 in EEPROM36 connected to the internal bus 38 based on the entrepreneur number D11 contained in the telephone number D1 in CPU33 at step C2 is referred to. And if there is a domain name D2 of the entrepreneur number D11 of the phase hand who corresponds by the reference result at step C3, it will shift to step C5.

[0077] Since a portable telephone user's input mistake \*\*\*\* probability is high when there is no domain name D2 of the entrepreneur number D11 of the phase hand who corresponds by the reference result at the above-mentioned step C3, it shifts to step C4 and the reinput demand of the telephone number D1 is made to a user in CPU33. As for a reinput demand, the message of "phase hand's cellular phone business operator's domain name D2 is not found" is displayed on the liquid crystal display monitor 23. In response, a user is made as [ input / the telephone number D1 except the content of electronic mail information / again ].

[0078] And by CPU33, the entrepreneur number D11 is made into the address to EEPROM36 at step C5, and reading appearance of phase hand's cellular phone business operator's domain name D2 is carried out from a domain name reference table. Then, the telephone number D1 of the phase hand who shifted to step C6 and was previously inputted in CPU33, and the domain name D2 read from the reference table are compounded, and a transmitting phase hand's mail address D0 is built. Then, in CPU33, signal processing of a mail address D0 and the electronic mail information is carried out through the sending-signal processing section 43 and the wireless transmitting section 44 at step C7, and it is transmitted to a base transceiver station 11 through the antenna common machine 45 and an antenna 26.

[0079] After that, as the 1st example explained, it is transmitted to a phase hand through the Internet 15 by the cellular phone business operator. Within phase hand's cellular phone business operator's GW server equipment 14, based on a mail address D0, the subscriber's number of a phase hand user's portable telephone 101 is found out, and an electronic mail is transmitted to a phase hand's portable telephone 101 through the exchange 13 and a base transceiver station 11.

[0080] And with the portable telephone 101 concerned, it is judged at step C8 whether electronic mail transmission is ended. The decision in this case is a user. When continuing electronic mail transmission, it waits to return to step C1 and to input the telephone number D1 of the electronic mail information from a user, and its phase hand.

[0081] Thus, when communicating electronic mail information based on the mail address D0 which has a phase hand's telephone number D1, and a cellular phone business operator's domain name D2 according to the portable telephone 101 as the 2nd example concerning this invention, EEPROM36 which memorized the reference table which matched the entrepreneur number D11 and the domain name D2 of the cellular phone business operator concerned beforehand is built in the portable telephone 101.

[0082] Therefore, even if a user does not input a cellular phone business operator's domain name D2 other than a phase hand's telephone number D1 one by one like the conventional method, in CPU33, the domain name D2 read from the telephone numbers D1 and EEPROM36 of the phase hand inputted by the user can be compounded, and automatic construction of the mail address D0 can be carried out. Thereby, a user only inputs the telephone number D1 containing a cellular phone business operator's identification number D11, and can transmit electronic mail information to the other party. The input operability at the time of the electronic mail transmission in a portable telephone 101 is improvable.

[0083] In addition, what removed the domain reference table function from the portable telephone 101 applied in the 2nd example is applied to portable telephone #i of the 1st example etc. Of course, the portable telephone 101 which attached the domain reference table function in portable telephone #i of the 1st example etc. may be made intermingled. It can respond to the transition stage of a case so that it may be unified into either of two methods which the electronic mail communication link service system 100 mentioned above enough.

[0084] (4) Example drawing 9 of updating of a domain name reference table is drawing showing the example of a line connection at the time of the renewal of the domain name D2 concerning each example (between an entrepreneur and a user). Drawing 10 is a flow chart which shows the example of updating of the domain name reference table in a portable telephone 101. In this example, each cellular phone business operator's domain name D2 is registered into a cellular phone business operator's database 12, and it is premised on the case where a domain name reference table with a built-in portable telephone is updated according to modification of this domain name D2.

[0085] In the communication system 100 shown in drawing 9, the line connection of between a cellular phone

business operator's GW server equipment 14 and a user's portable telephones 101 is carried out periodically, and it is made as [ transmit / periodically / from a cellular phone business operator / to a user's portable telephone 101 / update information ]. In this example, the portable telephone 101 of a standby condition is started by the cellular phone business operator, and while a user does not mean, it is made as [ update / a domain name D2 / at any time ] (table automatic rewriting mode).

[0086] For example, when a cellular phone business operator's domain name D2 is changed, a cellular phone business operator's database 12 is first updated by GW server equipment 14. Update information is transmitted to a user's portable telephone 101 from a cellular phone business operator's GW server equipment 14 by line connection \*\* with modification of the domain name D2 in this database 12.

[0087] At a user side, update information is received at step E1 of the flow chart shown in drawing 10 . If update information is received, it will be judged by CPU33 whether it shifts to step E2, the content of the domain name reference table is checked, and there is any updating part or there is nothing.

[0088] For example, it is distinguished whether CPU33 has an updating part by comparing the domain name D2 corresponding to the entrepreneur number D11 before corresponding updating with the domain name D2 corresponding to the entrepreneur number D11 based on update information. Therefore, when there is an updating part, it shifts to step E3 and the domain name reference table in EEPROM26 is updated by CPU33 based on update information.

[0089] Update information is canceled when already updated. Thereby, a domain name reference table can be rewritten. Then, it shifts to step E4 and a cellular phone business operator is notified of an updating check from a portable telephone 101 by line connection \*\*. Thereby, in a portable telephone 101, an electronic mail can be transmitted by the cellular phone business operator using the domain name reference table always updated by the newest.

[0090] Drawing 11 is drawing showing the example of a line connection at the time of the renewal of the domain name D2 concerning each example (between cellular phone business operators). In this example, a database 12 is formed for every cellular phone business operator, and it is made to carry out renewal of automatic of each cellular phone business operator's domain name D2 memorized by these databases 12 at any time. Of course, it is premised on the case where other cellular phone business operators' domain name D2 is registered in each cellular phone business operator's database 12.

[0091] In the communication system 100 shown in drawing 11 , when there is modification of a domain name D2 by the corresponding cellular phone business operator, the line connection of between a cellular phone business operator's GW server equipment 14 and other cellular phone business operators' GW server equipment 14 is carried out, and it is made as [ update / notify the purport which had updating to other cellular phone business operators, and / the domain name reference table ]. It needs, even if it transmits update information to other cellular phone business operators' B GW server equipment 14 periodically in this example from one cellular phone business operator's A GW server equipment 14.

[0092] For example, when a certain cellular phone business operator's B domain name D2 is changed, the database 12 of the corresponding cellular phone business operator B is first updated by GW server equipment 14. Update information is transmitted to other cellular phone business operators' A GW server equipment 14 from a cellular phone business operator's B GW server equipment 14 by line connection \*\* with modification of the domain name D2 in this database 12.

[0093] In other cellular phone business operator A side, it is judged by GW server equipment 14 whether update information is received, the content of the domain name reference table is checked, and there is any updating part or there is nothing. For example, it is distinguished whether GW server equipment 14 has an updating part by comparing the domain name D2 corresponding to the entrepreneur number D11 before corresponding updating with the domain name D2 corresponding to the entrepreneur number D11 based on update information. Therefore, when there is an updating part, based on update information, the domain name reference table in a database 12 is updated by GW server equipment 14.

[0094] Update information is canceled when already updated. Thereby, the domain name reference table in a cellular phone business operator's A database 12 can be rewritten. Then, the cellular phone business operator B who demanded updating from the carrier beam cellular phone business operator A is notified of an updating check in update information by line connection \*\*. Therefore, in a cellular phone business operator A, an electronic mail can be transmitted using the domain name reference table always updated.

[0095] Thus, according to the example of updating of the domain name D2 concerning each example, even when there is modification of a mail address D0 (mainly domain name D2) by the demand by the side of a cellular

phone business operator B, even if the user who contracted by the cellular phone business operator A does not input a cellular phone business operator's B domain name D2 other than a phase hand's telephone number D1 one by one like the conventional method, a domain name D2 can be updated among cellular phone business operators. An electronic mail can be transmitted and received only with a phase hand's telephone number D1, and the user-friendliness of a portable telephone 101 can be raised for an electronic mail subscriber. The input operability of a mail address D0 can be improved, and electronic mail information can be transmitted only with a phase hand's telephone number D1.

[0096]

[Effect of the Invention] As explained above, when communicating electronic mail information based on a mail address according to the communication system concerning this invention, it has communication management equipment managed so that a communication link entrepreneur's identification number information may be made into the address and the domain name information of the communication link entrepreneur concerned may be read from storage, and this communication management equipment compounds the telephone number received from the communication device, and the domain name information read from storage, and builds a mail address.

[0097] By this configuration, even if a user does not input a communication link entrepreneur's domain name other than the telephone number into a communication device one by one like the conventional method, automatic construction of the mail address which consists of a telephone number + domain name can be carried out by the communication link entrepreneur side. Therefore, a user only inputs the telephone number including a communication link entrepreneur's identification number information, and can transmit electronic mail information to the other party. The input operability of a mail address is improvable.

[0098] According to the communication device concerning this invention, when communicating electronic mail information based on a mail address, it has the control unit which makes the address a communication link entrepreneur's identification number information, and reads the domain name information of the communication link entrepreneur concerned from storage, and this control unit compounds the telephone number inputted by the user and the domain name information read from storage, and builds a mail address.

[0099] By this configuration, even if a user does not input a communication link entrepreneur's domain name other than the telephone number one by one like the conventional method, automatic construction of the mail address which consists of a telephone number + domain name can be carried out. Therefore, a user only inputs the telephone number including a communication link entrepreneur's identification number information, and can transmit electronic mail information to the other party. The input operability of a mail address is improvable.

[0100] When communicating electronic mail information based on a mail address according to the correspondence procedure concerning this invention When creating the reference table which matched a communication link entrepreneur's identification number information, and the domain name information of the communication link entrepreneur concerned beforehand and transmitting electronic mail information Make into the address a communication link entrepreneur's identification number information that inputted the telephone number including a communication link entrepreneur's identification number information, and it was inputted here, and the domain name information of the communication link entrepreneur concerned is read from a reference table. It is made as [ build / compound the telephone number inputted previously and the domain name information read from the reference table, and / a mail address ].

[0101] By this configuration, even if a user does not input a communication link entrepreneur's domain name other than the telephone number one by one like the conventional method, automatic construction of the mail address which consists of a telephone number + domain name can be carried out. Therefore, a user only inputs the telephone number including a communication link entrepreneur's identification number information, and can transmit electronic mail information to the other party. The input operability of a mail address is improvable. This invention is applied to the electronic mail communication link service system using a portable telephone, a personal computer, etc., and is very suitable.

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[Translation done.]



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DESCRIPTION OF DRAWINGS

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## [Brief Description of the Drawings]

[Drawing 1] It is the block diagram showing the example of a configuration of the communication system 10 as an operation gestalt concerning this invention.

[Drawing 2] It is the flow chart which shows the example of processing in communication system 10.

[Drawing 3] It is the block diagram showing the example of a configuration of the electronic mail communication link service system 100 as the 1st example concerning this invention.

[Drawing 4] It is drawing showing a telephone number system and the example of a configuration of a mail address.

[Drawing 5] It is image drawing showing the example of a content of a domain name reference table.

[Drawing 6] It is the flow chart which shows the example of processing in a communication link entrepreneur's GW server equipment 14.

[Drawing 7] It is the block diagram showing the example of an internal configuration of a portable telephone 101 as the 2nd example concerning this invention.

[Drawing 8] It is the flow chart which shows the example of processing at the time of the electronic mail transmission in a portable telephone 101.

[Drawing 9] It is drawing showing the example of a line connection at the time of the renewal of a domain name D2 (between an entrepreneur and a user).

[Drawing 10] It is the flow chart which shows the example of updating of a domain name reference table.

[Drawing 11] It is drawing showing the example of a line connection at the time of the renewal of a domain name D2 (between communication link entrepreneurs).

## [Description of Notations]

1 ... Communication management equipment, 2 ... Storage, 10 ... Communication system, 11 ... A base transceiver station, 12 ... A database (storage), 13 ... Exchange (communication management equipment), 14 ... GW server equipment (communication management equipment), 15 ... Internet (communication network), 33 [ ... A manual operation button (input means) 100 / ... An electronic mail communication link service system, #i (# n+1 i=1-n, ...), 101 / ... Portable telephone ] ... CPU (control unit), 36 ... EEPROM (store), 27 ... A key array (input means), 25

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[Translation done.]

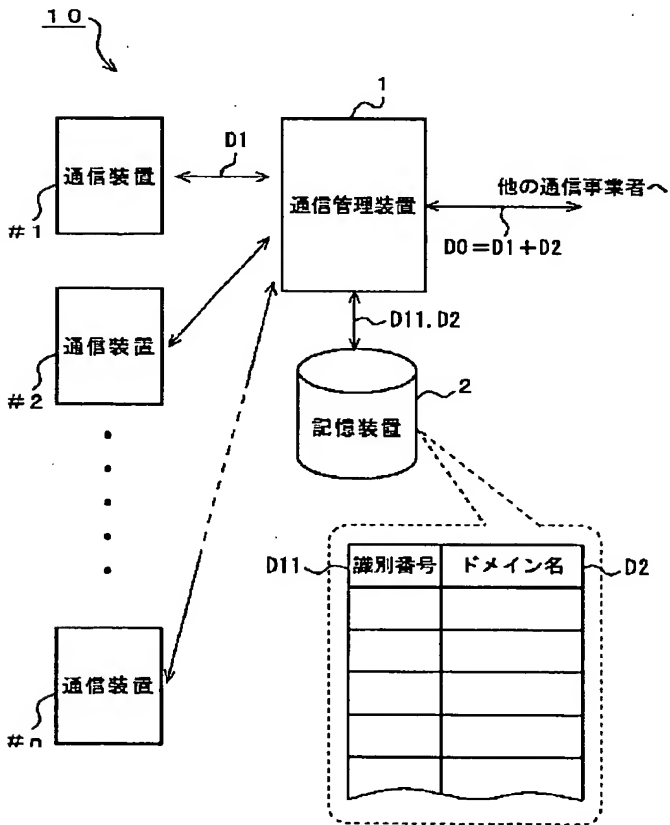
\* NOTICES \*

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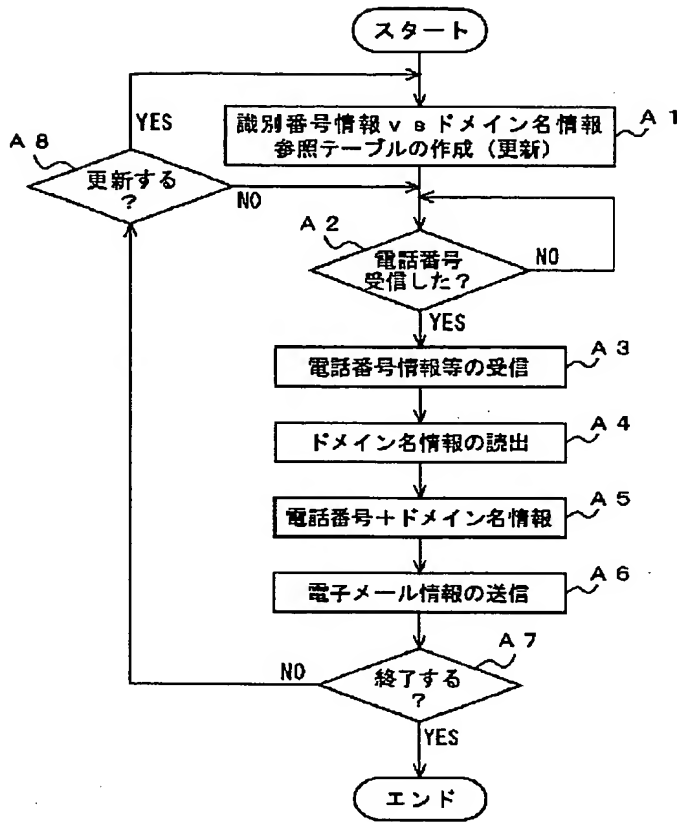
DRAWINGS

[Drawing 1]  
実施形態としての通信システム 10 の構成例



[Drawing 2]

# 通信システム 10 における処理例



[Drawing 4]  
電話番号体系及びメールアドレスの構成例

(A) 000 - △△△ - ×××××  
サービス番号 事業者番号 加入者番号

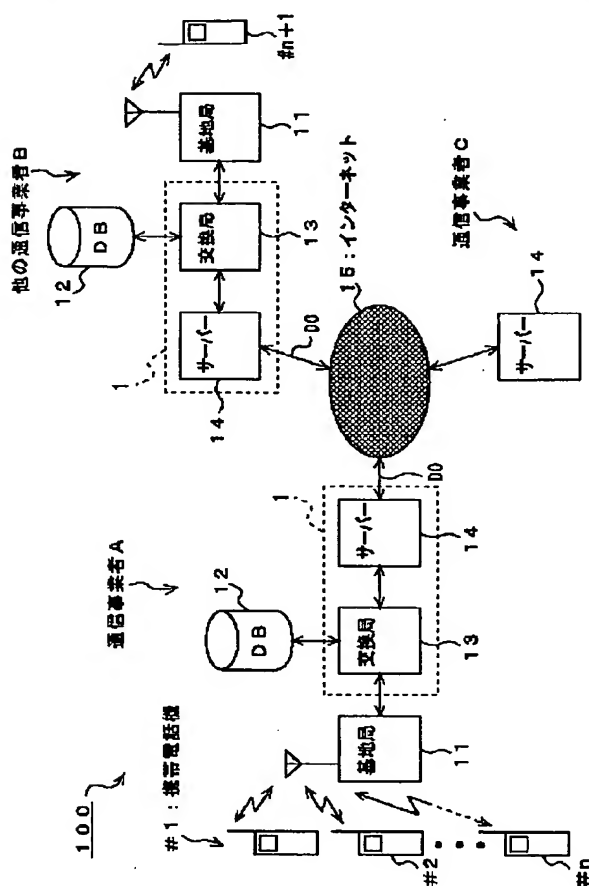
(B) メールアドレス=電話番号@ドメイン名

[Drawing 5]  
ドメイン名参照テーブルの内容例

ドメイン表		
事業者番号	国番号	対応ドメイン名
3 4 5	8 1	@aaa. bbbb. ne. jp
7 9 8	1	@xxx. aaaa. no. jp
1 2 3	8 1	@yyy. zzzz. no. jp

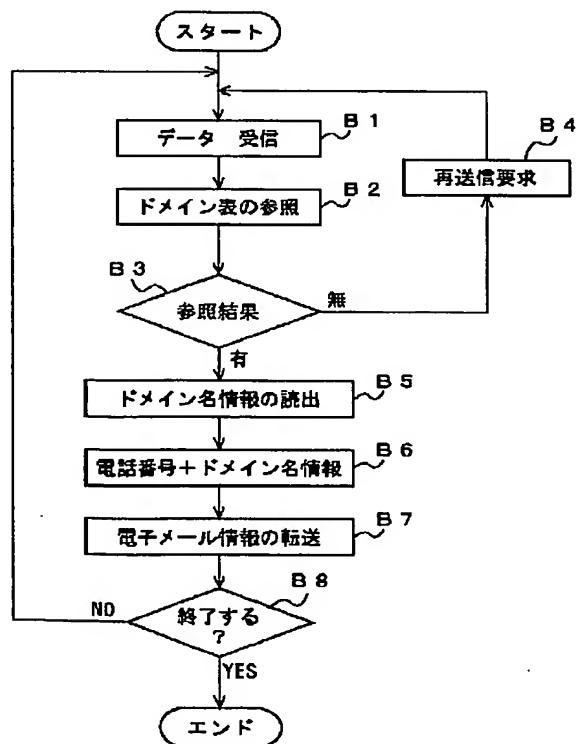
[Drawing 3]

## 電子メール通信サービスシステム 100 の構成例



[Drawing 6]

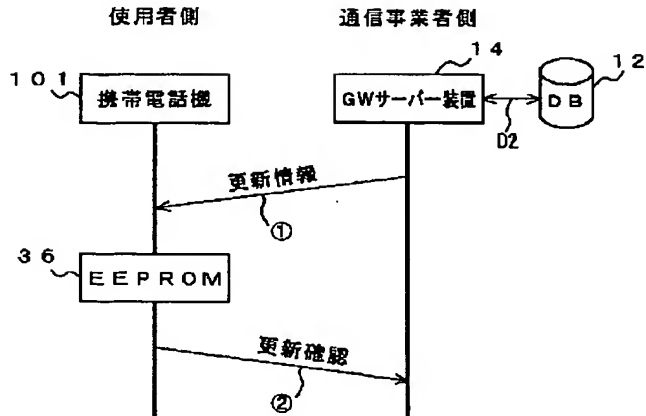
GWサーバ装置 14 における処理例



[Drawing 9]

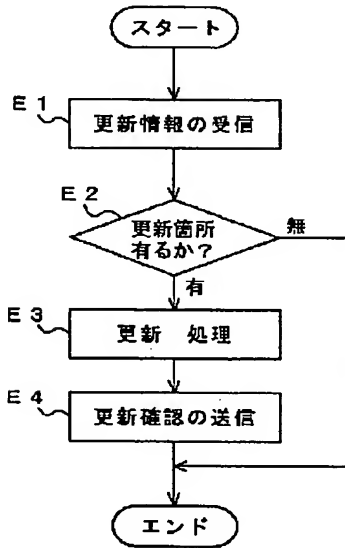
ドメイン名D2の更新（事業者・ユーザー間）時の  
回線接続例

100



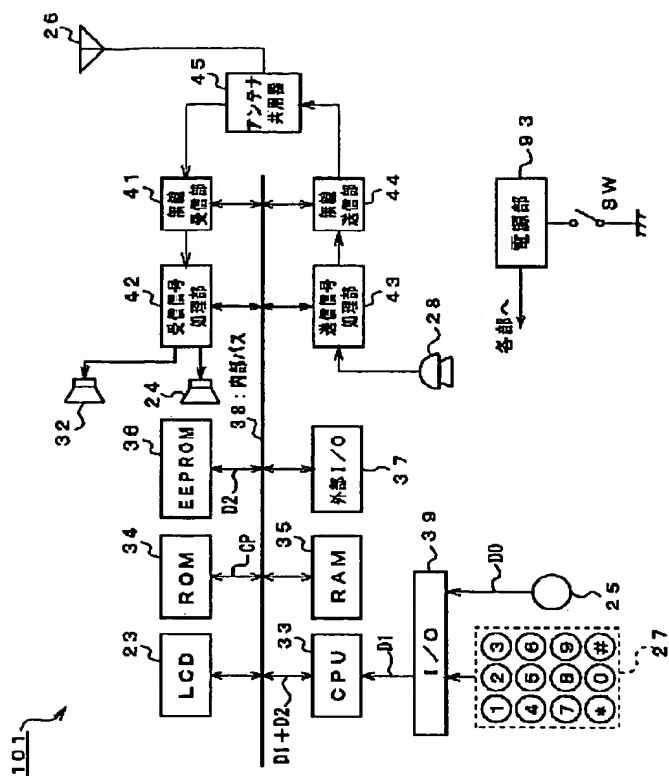
[Drawing 10]

ドメイン名参照テーブルの更新例



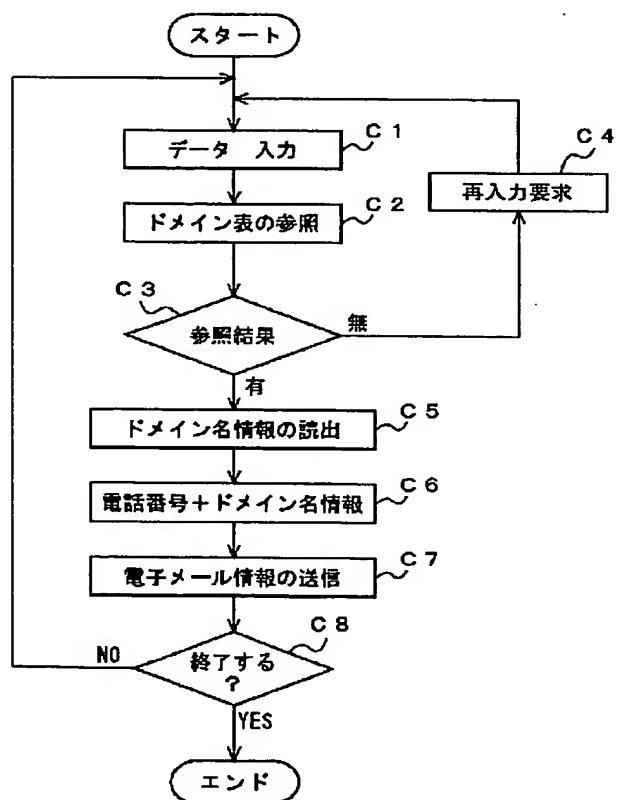
[Drawing 7]

## 携帯電話機 101 の内部構成例



[Drawing 8]

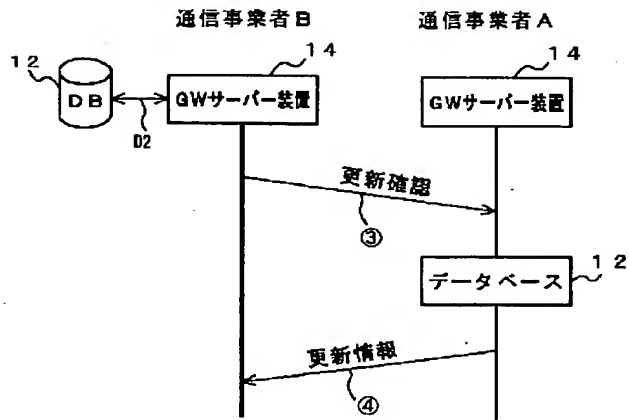
## 電子メール送信時の処理例



[Drawing 11]

ドメイン名D2の更新（通信事業者間）時の  
回線接続例

100



[Translation done.]